

## **ABSTRACT OF THE DISCLOSURE**

The invention provides a sensing device comprising: a vessel; a plurality of sensor beads located within the vessel to form interstitial spaces therethrough; and a plurality of biomolecules bound to at least a portion of the plurality of beads, each of the biomolecules having a fluorescent tag. The invention also provides a method for detecting the binding of two biomolecules comprising the following steps: providing a plurality of first biomolecules, each of the first biomolecules having a first fluorescent tag, each of the first biomolecules being bound to a respective substrate of a plurality of substrate; providing a plurality of second biomolecules, each of the second biomolecules having a second fluorescent tag, binding at least a portion of the second biomolecules to at least a portion of the first biomolecules to form complexes, wherein the plurality of first biomolecules and the plurality of second biomolecules prior to the binding step have a pre-complexing total fluorescence and wherein the complexes and free second biomolecules after the binding step have a post-complexing total fluorescence; and detecting any difference between the pre-complexing total fluorescence and the post-complexing total fluorescence. A sensing device comprising a suspension of a plurality of sensor beads; and a plurality of biomolecules bound to at least a portion of the plurality of beads, each of the biomolecules having a fluorescent tag is also provided.

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